Claims 1, 3, 10, 11, 14, 17, 21, and 25-36 are pending in the application.

Claims 1-5, 7-11, 13-17, 19-21, and 23-24 stand rejected.

Claims 1, 3, 10, 11, 14, 17, and 21 have been amended. Support for these amendments can be found, at least, in paragraphs 33, 34, 35, 41, and 48 of the specification. No new matter has been added.

Claims 25-36 have been added. Support for these claims can be found, at least, in paragraphs 33, 34, 35, 41, 48, 50, 72, and 79 of the specification. No new matter has been added.

Rejection of Claims under 35 U.S.C. §103

Claims 1-5, 7-8, 11, 13-21, and 23-24 are rejected under 35 U.S.C. § 103(a) as being obvious over Huras (U.S. Patent Publication 2005/0278393) (hereinafter referred to as "Huras") in view of Shih et al. (U.S. Patent No. 6,615,223) (hereinafter referred to as "Shih").

The cited art fails to teach or suggest each and every feature of amended claim 1, which now recites:

> replicating data from a first volume to a second volume, wherein the replicating comprises copying to the second volume only data from regions of the first volume that are modified by application-driven update operations, wherein the application-driven update operations are initiated by an application managing data in the first volume;
>
> while the replicating the data from the first volume is being performed, detecting a change to a first region of the first volume, wherein the change is caused by a restore operation to restore the first volume from a third volume, wherein the restore operation is not an application-driven update operation initiated by the application;
>
> in response to the detecting, adding information identifying the first region to a data structure, wherein the data structure identifies regions of the first

volume that are designated for replication, wherein the adding is performed while the replicating is being performed; and

in response to the adding the information to the data structure, replicating data from the first region of the first volume to the second volume, wherein the replicating the data from the first region is performed while the replication of the data from the first volume is ongoing, and wherein the replicating the data from the first volume, the detecting, the adding, and the replicating the data from the first region is performed by a computing device implementing a replication facility.

In particular, the cited art fails to teach or suggest the data structure recited in claim 1, which identifies regions of the first volume that are designated for replication. The cited art also fails to teach or suggest the use of the data structure described in claim 1, which states that adding information identifying a first region to the data structure causes the region to be replicated. Similarly, the cited art fails to teach or suggest being able to perform both normal replication, which replicates only changes caused by application-driven update operations, and replication of changes caused by non-application-driven update operations such as the restore operation of claim 1. The cited art also fails to teach or suggest being able to perform operations related to replicating non-application-driven update operations (e.g., the detecting, adding, and second replicating operation of claim 1) while replication of application-drive update operations is ongoing.

For at least the foregoing reasons, amended claim 1 is patentable over the cited art, as are dependent claims 3, 10, 11, and 25-28. Claims 14, 17, 21, and 29-36 are patentable over the cited art for similar reasons.

Claims 9 and 10 are rejected under 35 U.S.C. § 103(a) as being obvious over Huras in view of Shih in further view of Lomet (U.S. Pat. 6,578,041). Claim 9 has been canceled, and thus this rejection of claim 9 is now moot. Claim 10 is patentable over the cited art for at least the foregoing reasons set forth above with respect to claim 1.

CONCLUSION

In view of the amendments and remarks set forth herein, the application and the claims therein are believed to be in condition for allowance without any further examination and a notice to that effect is solicited. Nonetheless, should any issues remain that might be subject to resolution through a telephone interview, the Examiner is invited to telephone the undersigned at 512-439-5087.

If any extensions of time under 37 C.F.R. § 1.136(a) are required in order for this submission to be considered timely, the Applicants hereby petition for such extensions. The Applicants also hereby authorize that any fees due for such extensions or any other fee associated with this submission, as specified in 37 C.F.R. § 1.16 or § 1.17, be charged to Deposit Account 502306.

Respectfully submitted,

/Brenna A. Brock/

Brenna A. Brock
Attorney for Applicants
Reg. No. 48,509
Telephone: (512) 439-5087
Facsimile: (512) 439-5099